



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/651,137	08/28/2003	Pia Kopf	41118US	8178
29450	7590	12/15/2004	EXAMINER	
BARLEY SNYDER, LLC 1000 WESTLAKES DRIVE, SUITE 275 BERWYN, PA 19312			HYEON, HAE M	
			ART UNIT	PAPER NUMBER
			2839	

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/651,137

Applicant(s)

KOPF ET AL.

Examiner

Hae M Hyeon

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment: See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,3-12, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowen et al (5,039,456) in view of Watanabe et al (4,832,720).

Bowen discloses an optical short-circuit plug assembly comprising a plug housing 6 enveloping a plug 2 and 3, a short-circuit insert 10 having a plug region 17 and 18 with two mutually parallel optical fiber ends 15 and 16 of an optical fiber portion 11 in which the optical fiber portion 11 has a curved portion guided in an arc of substantially 180 degrees. The short-circuit insert 10 has a latching means 31 and 32 for a primary securing mechanism for securing the short-circuit insert in the plug housing 6 which is a socket connector. Figure 3 shows the arc of the optical fiber portion being enveloped in a plastic carrier 24. However, Bowen does not disclose the optical fiber portion 11 to be formed of a multi-component glass core with cladding or a multi-core glass fiber with cladding.

Watanabe discloses an optical fiber formed of a multi-core glass fiber with a cladding (see column 8, lines 55-58) having the cladding with a refractive index lower than of the core fibers. The multi-core optical fiber of Watanabe provides improved dimensional accuracy.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the optical short-circuit plug assembly taught by Bowen such

Art Unit: 2839

that it would have a multi-core glass fiber with cladding as taught by Watanabe to provide a multi-core glass fiber with improved dimensional accuracy. Also, the use of a multi-core class fiber only deals with using one type of optical fiber over another type, which does not change or affect the optical short-circuit plug assembly.

Regarding to claim 17 which reciting a bend radius of the optical fiber, since the optical fiber of Watanabe is the same type optical fiber and has a smaller size core, it is inherent that the optical fiber of Watanabe has a bend radius of less than 5 mm.

Regarding to claims 3-6, 8-10, 15 and 16, these claims recite different sizes of components in the optical short-circuit plug assembly. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

3. Claims 2 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Bowen et al (5,039,456) and Watanabe et al (4,832,720) as applied to claims 1, 3-12 and 14-16 above, and further in view of Bowen et al (4,418,983).

Claims 2 and 13 recite a secondary securing for the short-circuit insert. However, Bowen '456 only discloses one securing means. On the other hand, Bowen '983 discloses an optical waveguide connector 2 having a plurality of spaced gripping flanges 10 for securing the connector 2 within the plug 58 and retention flange 12 and a rib 14 for engaging with a passageway 40 of a receptacle 38.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the optical short-circuit insert taught by Bowen '456 such that it would have one or more shoulders for primary securing and secondary securing of the short-

Art Unit: 2839

circuit insert in a plug housing as taught by Bowen '983 because the use of a shoulder is a simple structure that provides a secure engagement between two objects.

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bowen et al (5,039,456) and Watanabe et al (4,832,720) as applied to claims 1, 3-12 and 14-16 above, and further in view of Graham et al (4,952,798).

Claim 18 recites that the housing comprises two halves that are joined around the optical fiber. While Bowen does not show two halves of the housing, Graham discloses the same optical simulator 10 comprising a housing having two halves 13 and 14.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the housing taught by Bowen such that it would have two halves as taught by Graham because a housing made of two halves is well known and common knowledge.

Response to Arguments

5. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues that there is no reason to combine the invention of Kumar et al (6,611,648 B2), a multi-core glass fiber with cladding reducing cross-talk by providing different mean propagation constants, with the invention of Bowen et al (5,039,456), a short-circuit circuit plug, since the short-circuit plug of Bowen does not have cross-talk problem. The examiner agrees with the applicant's argument. However, in view of claim 1, Bowen clearly discloses all the structure of the optical short-circuit insert recited in claim 1 except for the optical fiber

Art Unit: 2839

comprising the multi-component glass core with cladding or a multi-core glass fiber with cladding. Since claim 1 does not recite any other structure or functionality of the optical fiber other than it being the multi-component glass core with cladding or the multi-core glass fiber with cladding and the multi-component glass core with cladding or the multi-core glass fiber with cladding is known in the art of an optical fiber, it would have been obvious to replace the optical fiber of Bowen with the multi-component glass core with cladding or the multi-core glass fiber with cladding. To show that the multi-component glass core with cladding or the multi-core glass fiber with cladding is known, the examiner has found a reference by Watanabe which teaches a multi-core glass fiber with cladding. Also, the examiner has listed other references that teach the multi-component glass core with cladding or the multi-core glass fiber with cladding.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 5,377,293 by Hatori et al., US Patent No. 5,792,233 by Chesnoy et al., US Patent No. 5,892,615 by Grubb et al., and US Patent No. 6,259,830 B1 by Bhagavatula disclose an optical fiber having a multi-component glass core with cladding or a multi-core glass fiber with cladding.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M Hyeon whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

Art Unit: 2839

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C Patel can be reached on (571) 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hae M Hyeon
Primary Examiner
Art Unit 2839

hnh hnh

Hae Moon Hyeon